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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/587,434

07/27/2006

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EXAMINER

LEYKIN, RITA

ART UNIT

PAPER NUMBER

2837

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/587,434	Applicant(s) OYOBE ET AL.	
	Examiner Rita Leykin	Art Unit 2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-9 and 12-14 is/are rejected.
- 7) ☐ Claim(s) 4, 5, 10 and 11 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>07/27/06</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3, 6-9, 12-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Ishikawa et al. US # 7,362,597.

The applied reference has a common inventor Ishikawa with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

With respect to claim 1, Ishikawa et al. discloses an AC voltage generating apparatus and motive power outputting apparatus. Ishikawa et al. system includes a first motor generator MG1 and a second motor generator MG2. First inverter 30 and the

second inverter 40 receive an input voltage from battery B. A control apparatus 10 that controls operation of the first and second inverters based on output values conveyed via voltage sensors 10 and 13. In accordance with signal PWM1 from control apparatus 70, inverter 30 drives motor generator MG1 so that transformer 50 inserted between neutral points of MG1 and MG2 can output a commercial-power-source-AC voltage from terminals 61 and 62. Also in accordance with signal PWM2 from control apparatus 70, inverter 40 drives motor generator MG2 so that transformer 50 can output commercial-power-source-AC voltage from terminals 61 and 62.

With respect to claimed control of first and second inverters in coordination such that intermediate value between a maximum value and a minimum value of voltage controls first and second motor generators and is equivalent to an intermediate potential of the input voltage Ishikawa et al. discloses:

- A voltage sensor 13 that detects voltage between both ends of capacitor C2. Wherein the output V_m is supplied to control apparatus 70. Based on the sensed voltage signal V_m and other inputs to controller 70, two signals PWM1 and PWM2 outputted to inverter 30 and inverter 40. And signal PWC is outputted to converter 20. Ishikawa et al. disclose that potential of neutral point M raises and lowers relative to voltage $V_m/2$, that is supplied to both inverters 30 and 40. When if duty ratio $DUTY1 > DUTY2$ the potential of neutral point M becomes lower than $V_m/2$, and when $DUTY1 < DUTY2$ the potential of neutral point M becomes higher than $V_m/2$, (see col. 13, lines 18-40).

With respect to claim 2, Fig. 1 shows application of input voltage V_m to supply inverter 30 and 40.

With respect to claim 3, controller 70, shown in Fig. 1 and 2 comprises first inverter control means 72 and second inverter control means 73. Where in the subtraction of calculated intermediate value presented as subtraction of (DUTY1 - DUTY2) and (DUTY4—DUTY 3), (see col. 13, lines 50-55).

With respect to claim 6, Fig. 1 shows DC power source presented as a battery B. Claimed up-converter presented as boost converter 20, wherein by controlling the duty ratio of transistors Q1 and Q2 the voltage of power supply line can be controlled to any voltage at least at the output voltage of battery B, (see col. 9, lines 3-6).

With respect to claims 7-9, 12-14, see col. 5, lines 3-10 and previously discussed control structure, as in rejection of claim 1 paragraph. Claimed electric load connected to neutral points of first and second generators is presented in Fig. 1 and transformer 50.

Allowable Subject Matter

1. Claims 4, 5, 10, 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
2. The following is a statement of reasons for the indication of allowable subject matter: The prior art made of record in the attached form PTO-892 considered to be

pertinent to the submitted application. However, none of the prior art teaches or suggests claimed limitations in combination with:

- The control system includes a voltage compensation unit compensation for voltage drop caused by internal impedance of the first and second motor generator.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rita Leykin whose telephone number is (571)272-2066. The examiner can normally be reached on Monday-Friday 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lincoln Donovan can be reached on (571)272-1988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Rita Leykin

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Primary Examiner
Art Unit 2837

/Rita Leykin/
Primary Examiner, Art Unit 2837